

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 23, 2003, 15:03:51 Search time 70 Seconds
(without alignments)
350.259 Million cell updates/sec

Title: AAK91826
 Perfect score: 965
 Sequence: 1 MRGPRSLRGDAPAPTPCV.....ATELGSTELVTTKTAGEEQ 184

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues
Total number of hits satisfying chosen parameters: 908470

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Minimum DB seq length: 0
Maximum DB seq length: 20000000000
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

1. A_genseq_101.002.*
2. /SIDS2/gcgdata/genseq/genseqp-emb1/AA1980.DAT.*
3. /SIDS2/gcgdata/genseq/genseqp-emb1/AA1981.DAT.*
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21. /SIDS2/gcgdata/genseq/genseqp-emb1/AA2000.DAT.*
22. /SIDS2/gcgdata/genseq/genseqp-emb1/AA2001.DAT.*
23. /SIDS2/gcgdata/genseq/genseqp-emb1/AA2002.DAT.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	length	DB	ID	Description
1	965	100.0	184	23	ABB81483	Human Znf612 protein
2	965	100.0	266	23	AAE22243	Human JST576 (BAF226)
3	954.5	98.9	185	23	AAE22242	Human mature JST57
4	947.5	98.2	185	23	AAE22270	Human BAF2 receptor
5	946.5	98.1	185	23	AAE22271	Human BAF2 receptor
6	943.5	97.8	185	23	AAE22268	Human BAF2 receptor
7	939.5	97.4	185	23	AAE22269	Human BAF2 receptor
8	935.5	96.9	185	23	AAE22267	Human BAF2 receptor
9	928.5	96.2	185	23	AAE22266	Human BAF2 receptor
10	410.5	42.5	175	23	ABB81489	Mouse Znf612 protein

[illegible]

ALIGNMENTS

XX	RESULT 1
XX	ABB81483
ID	ABB81483 standard; Protein; 184 AA.
XX	ABB81483;
AC	
XX	02-SEP-2002 (first entry);
DT	
XX	
DE	Human Ztnfr12 protein SEQ ID NO:2.
XX	
XX	Human; Ztnfr12; tumour necrosis factor receptor; cytostatic;
KW	immunosuppressive; dermatological; antiinflammatory; antidiabetic;
KW	neuroprotective; antirheumatic; antiarthritic; antiaesthetic;
KW	nephrotoxic; hypotensive; gene therapy; B lymphocyte; tumour;
KW	autoimmune disorder; systemic lupus erythematosus; myasthenia gravis;
KW	multiple sclerosis; insulin dependent diabetes mellitus; asthma;
KW	rheumatoid arthritis; bronchitis; emphysema; renal disease; lymphoma;
KW	glomerulonephritis; vasculitis; chronic lymphoid leukaemia; nephritis;
KW	pyelonephritis; renal neoplasm; multiple myeloma; amyloidosis;
KW	light chain neuropathy; hypertension; large vessel disease;
KW	graft-versus host disease; graft rejection; Crohn's disease;
KW	chromosome 22q13.2.
XX	
OS	Homo sapiens.
XX	
PN	WO200238766-A2.
XX	
PD	16-MAY-2002.
XX	
PF	05-NOV-2001; 2001WO-US47018.
XX	
XX	07-NOV-2000; 2000US-246449P.
PR	20-DEC-2000; 2000US-257131P.
PR	

PR 28-JUN-2001; 2001US-301715P.
 PR 29-AUG-2001; 2001US-315565P.
 XX (ZYMO) ZYMOGENETICS INC.
 PA Gross JA, Xu W, Henne RM, Grant FJ;
 PI MPI: 2002-508212/54.
 DR N-PSDB; AABN9426.
 XX
 PT Novel isolated human tumor necrosis factor receptor polypeptide, termed
 PT Zntfr12, useful for treating autoimmune disorders, emphysema, and
 PT stage renal failure or renal disease and lymphoma
 XX
 PS Claim 3; Page 133; 154pp; English.
 XX
 CC The present sequence represents a human tumour necrosis factor receptor
 CC designated Zntfr12 (1). (1) has cytostatic, immunosuppressive,
 CC dermatological, antiinflammatory, neuroprotective, antidiabetic,
 CC antineumatic, antiarthritic, antiaesthetic, nephrotropic and hypotensive
 CC activities, and can be used in gene therapy. (1) can be used for
 CC inhibiting, in a mammal, the activity of a ligand that binds Zntfr12
 CC (e.g. Zntfr4), for treating disorders and diseases associated with B
 CC lymphocytes, activated B lymphocytes or resting B lymphocytes, and for
 CC inhibiting the proliferation of tumour cells. (1) is useful for treating
 CC autoimmune disorders such as systemic lupus erythematosus, myasthenia
 CC gravis, multiple sclerosis, insulin dependent diabetes mellitus, asthma,
 CC rheumatoid arthritis, bronchitis, emphysema and end stage renal failure,
 CC or renal disease such as glomerulonephritis, vasculitis, chronic lymphoid
 CC leukemia, nephritis, and pyelonephritis, and for treating renal
 CC neoplasms, multiple myelomas, lymphomas, light chain neuropathy, or
 CC amyloidosis, hypertension, large vessel diseases, graft-versus host
 CC disease, graft rejection and Crohn's disease. (1) is useful for
 CC modulating the immune system, for regulating B cell responses and
 CC development, for modulating development of other cells, antibody
 CC production and cytokine production, and for modulating T and B cell
 CC communication. Human Zntfr12 is located to chromosome 22q13.2.
 CC
 XX
 SQ Sequence 184 AA;
 Query Match 100.0%; Score 965; DB 23; Length 184;
 Best Local Similarity 100.0%; Pred. No. 4e-74;
 Matches 184; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 DB 1 MRGPRSLRGDAPAPPCVPAECFDLVHVCAGGLRTPPKPKAGSAPARTALQPO 60
 DB 1 MRGPRSLRGDAPAPPCVPAECFDLVHVCAGGLRTPPKPKAGSAPARTALQPO 60
 DB 61 ESVGAGAGGAALPLPGLLFGAPALLGLALVLAIVLVGLVSWRRORRLRGASAAEAPDGD 120
 DB 61 ESVGAGAGGAALPLPGLLFGAPALLGLALVLAIVLVGLVSWRRORRLRGASAAEAPDGD 120
 QY 121 KDAPEPLDKYIIISPGISDAPAPPPGDDPGTTPPGHSHVPPATLSTELVYTKTAG 180
 DB 121 KDAPEPLDKYIIISPGISDAPAPPPGDDPGTTPPGHSHVPPATLSTELVYTKTAG 180
 QY 181 PEOQ 184
 DB 181 PEOQ 184
 RESULT 2
 AAE22243
 ID AAE22243 standard; Protein: 266 AA.
 XX
 AC AAE22243;
 XX
 DT 25-JUL-2002 (first entry)
 XX
 DE Human JST576 (BAFF-R) CDNA spliced version encoded protein.
 XX Human; BAFF receptor; BAFF-R; cytotoxic; hypotensive; inflammation; TNF;
 KW Tumour Necrosis Factor; autoimmune disease; immunosuppressive; cancer;

KW myaesthesia gravis; hypertension; organ transplantation; drug screening;
 KW HIV; human immunodeficiency virus; genetic disorder; cardiovascular;
 KW renal; rheumatoid arthritis; systemic lupus erythematosus; amyloidosis;
 KW haemolytic anaemia; Chagas' disease; Grave's disease; glomerulonephritis;
 KW multiple myeloma; chromosomal mapping; tissue typing; drug screening;
 KW JST576.
 OS Homo sapiens.
 XX
 PN MO200224909-A2.
 XX
 PD 28-MAR-2002.
 XX
 PF 06-SEP-2001; 2001WO-US28006.
 XX
 PR 18-SEP-2000; 2000US-233152P.
 PR 21-SEP-2000; 2000US-234140P.
 PR 13-FEB-2001; 2001US-268499P.
 PR 14-AUG-2001; 2001US-312185P.
 XX
 PA (BIO) BIOGEN INC.
 XX
 PI Ambrose CM, Thompson JS;
 XX
 DR MPI: 2002-362428/39.
 DR N-PSDB; AAD35410.
 XX
 PT New human BAFF receptor proteins and nucleic acids, useful for
 PT creating, preventing or delaying e.g. autoimmune diseases, cancers,
 PT inherited genetic disorders involving B-cells, cardiovascular
 PT disorders, or renal disorders
 XX
 PS Example 3; Fig 3; 164pp; English.
 XX
 CC The invention relates to human BAFF receptor (BAFF-R) nucleic acids and
 CC proteins. BAFF-R is a B-cell activating factor belonging to the Tumour
 CC Necrosis Factor (TNF) family, which is associated with the expression of
 CC B-cells and immunoglobulins. The BAFF-R protein, DNA and antibodies are
 CC useful for treating, preventing or delaying autoimmune diseases, cancer,
 CC tumorigenic conditions or inherited genetic disorders involving B-cells,
 CC hypertension, cardiovascular disorders, immunosuppressive diseases, renal
 CC disorders, inflammation, organ transplantation and HIV. Autoimmune
 CC diseases, which can be treated or prevented by BAFF-R, include systemic
 CC lupus erythematosus, rheumatoid arthritis, myaesthesia gravis, autoimmune
 CC haemolytic anaemia, idiopathic thrombocytopenia purpura, Chagas' disease
 CC Grave's disease, anti-phospholipid syndrome, Wegener's granulomatosis,
 CC poly-arthritis nodosa and rapidly progressive glomerulonephritis. Plasma
 CC cells disorders e.g., multiple myeloma, Waldenstrom's macroglobulinemia,
 CC heavy-chain disease, primary or immunocyte-associated amyloidosis, and
 CC monoclonal gammopathy of undetermined significance. The nucleic acids,
 CC protein, protein homologues, and antibodies may further be used in
 CC screening assays, in detection assays (chromosomal mapping, tissue typing
 CC or forensic biology), predictive medicine (e.g. diagnostic or prognostic
 CC assays, monitoring clinical trials, or pharmacogenomic). The polypeptides
 CC are further useful as immunogens to raise anti-BAFF-R antibodies, or in
 CC screening drugs or compounds that modulate BAFF-R activity or expression.
 CC The present sequence is human mature JST576 (BAFF-R) CDNA spliced version
 CC containing 5' UTR encoded protein.
 CC
 XX
 SQ Sequence 266 AA;
 Query Match 100.0%; Score 965; DB 23; Length 266;
 Best Local Similarity 100.0%; Pred. No. 6e-74;
 Matches 184; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 MRGPRSLRGDAPAPPCVPAECFDLVHVCAGGLRTPPKPKAGSAPARTALQPO 60
 DB 83 MRGPRSLRGDAPAPPCVPAECFDLVHVCAGGLRTPPKPKAGSAPARTALQPO 142
 QY 61 ESVGAGAGGAALPLPGLLFGAPALLGLALVLAIVLVGLVSWRRORRLRGASAAEAPDGD 120
 DB 143 ESVGAGAGGAALPLPGLLFGAPALLGLALVLAIVLVGLVSWRRORRLRGASAAEAPDGD 202

QY 121 KDAPPELDKVIILISPGISDATAPAMPPEGDEPTTPPGHVSVPATLSTGLSTELVTTKTAG 180
 DB 203 KDAPPELDKVIILISPGISDATAPAMPPEGDEPTTPPGHVSVPATLSTGLSTELVTTKTAG 262
 QY 181 PEQG 184
 DB 263 PEQG 266

RESULT 3
 AAE22242
 ID AAE22242 standard; Protein; 185 AA.
 AAE22242;
 25-JUL-2002 (first entry)

Human mature JST576 (BAFF-R) protein.

Human; BAFF receptor; BAFF-R; cytosolic; hypotensive; inflammation; TNF; Tumour Necrosis Factor; autoimmune disease; immunosuppressive; cancer; myasthenia gravis; hypertension; organ transplantation; drug screening; HIV; human immunodeficiency virus; genetic disorder; cardiovascular; renal; rheumatoid arthritis; systemic lupus erythematosus; amyloidosis; haemolytic anaemia; Chagas' disease; Grave's disease; glomerulonephritis; multiple myeloma; chromosomal mapping; tissue typing; drug screening; JST576.

OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Domain 19..35
 FT Misc-difference /note= "Four cysteine motif"
 FT FT /note= 49
 FT Region /note= "Alternative splice acceptor site"
 FT FT /note= 72..100
 FT Domain /note= "Hydrophobic region"
 FT FT /note= 73..100
 FT Region /label= Transmembrane_domain
 FT FT 105..108
 FT /note= "Stop transfer signal"
 PN WO200224909-A2.
 XX 28-MAR-2002.
 PD
 XX
 PF 06-SEP-2001; 2001WO-US28006.
 18-SEP-2000; 2000US-233152P.
 21-SEP-2000; 2000US-234140P.
 13-FEB-2001; 2001US-268499P.
 14-AUG-2001; 2001US-312185P.
 PA (BIOJ) BIOGEN INC.
 XX
 XX Ambrose CM, Thompson JS;
 PI MPI: 2002-362428/39.
 DR N-PSDB; AAD35409.
 XX
 XX New human BAFF receptor proteins and nucleic acids, useful for
 PT treating, preventing or delaying e.g. autoimmune diseases, cancers,
 PT inherited genetic disorders involving B-cells, cardiovascular
 PT disorders, or renal disorders
 XX
 XX Claim 1; Fig 2d; 164pp; English.
 XX
 XX The invention relates to human BAFF receptor (BAFF-R) nucleic acids and
 CC proteins. BAFF-R is a B-cell activating factor belonging to the Tumour
 CC Necrosis Factor (TNF) family, which is associated with the expression of
 CC B-cells and immunoglobulins. The BAFF-R proteins, DNA and antibodies are
 CC useful for treating, preventing or delaying autoimmune diseases, cancer,
 CC tumorigenic conditions or inherited genetic disorders involving B-cells,

CC hypertension, cardiovascular disorders, immunosuppressive diseases, renal
 CC disorders, inflammation, organ transplantation and HIV. Autoimmune
 CC diseases, which can be treated or prevented by BAFF-R, include systemic
 CC lupus erythematosus, rheumatoid arthritis, myasthenia gravis, autoimmune
 CC haemolytic anaemia, idiopathic thrombocytopenia purpura, Chagas' disease
 CC Grave's disease, anti-phospholipid syndrome, Wegener's granulomatosis,
 CC poly-arthritis nodosa and rapidly progressive glomerulonephritis. Plasma
 CC cells disorders e.g., multiple myeloma, Waldenstrom's macroglobulinemia,
 CC heavy-chain disease, primary or immunocyte-associated amyloidosis, and
 CC monoclonal gammopathy of undetermined significance. The nucleic acids,
 CC protein, protein homologues, and antibodies may further be used in
 CC screening assays, in detection assays (chromosomal mapping, tissue typing
 CC or forensic biology), predictive medicine (e.g. diagnostic or prognostic
 CC assays, monitoring clinical trials, or pharmacogenomic). The polypeptides
 CC are further useful as immunogens to raise anti-BPR antibodies, or in
 CC screening drugs or compounds that modulate BAFF-R activity or expression.
 CC The present sequence is human mature JST576 (BAFF-R) protein.

SQ Sequence 185 AA;
 Query Match 98.9%; Score 954.5; DB 23; Length 185;
 Best Local Similarity 99.5%; Pred. No. 3.1e-73;
 Matches 184; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

QY 1 MRGRPSLRGRDAPAPTPCVAECFDLVRHCVAAGLRTPRPKAG-ASSPAPRTALQP 59
 DB 1 MRGRPSLRGRDAPAPTPCVAECFDLVRHCVAAGLRTPRPKAGASSPAPRTALQP 60

QY 60 QESVAGAGGEMALPLPGILFGAPALIGALVLAIVLVGVWRRRORLRGASSAEADG 119
 DB 61 QESVAGAGGEMALPLPGILFGAPALIGALVLAIVLVGVWRRRORLRGASSAEADG 120

QY 120 DKDAPPELDKVIILISPGISDATAPAMPPEGDEPTTPPGHVSVPATLSTGLSTELVTTKTGA 179
 DB 121 DKDAPPELDKVIILISPGISDATAPAMPPEGDEPTTPPGHVSVPATLSTGLSTELVTTKTGA 180

QY 180 GPEQG 184
 DB 181 GPEQG 185

RESULT 4
 AAE22270
 ID AAE22270 standard; Protein; 185 AA.
 XX
 AC AAE22270;
 XX
 DT 25-JUL-2002 (first entry)
 XX
 DE Human BAFF receptor (BAFF-R) mutant, V20N.
 XX
 KW Human; BAFF receptor; BAFF-R; cytosolic; hypotensive; inflammation; TNF;
 KW Tumour Necrosis Factor; autoimmune disease; immunosuppressive; cancer;
 KW myasthenia gravis; hypertension; organ transplantation; drug screening;
 KW HIV; human immunodeficiency virus; genetic disorder; cardiovascular;
 KW renal; rheumatoid arthritis; systemic lupus erythematosus; amyloidosis;
 KW haemolytic anaemia; Chagas' disease; Grave's disease; glomerulonephritis;
 KW multiple myeloma; chromosomal mapping; tissue typing; drug screening;
 KW mutant; mutlein.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Misc-difference 20 /note= "Wild type Val substituted with Asn"
 FT FT
 PN WO200224909-A2.
 XX
 XX 28-MAR-2002.
 PD
 XX
 PF 06-SEP-2001; 2001WO-US28006.
 XX
 XX 18-SEP-2000; 2000US-233152P.

FT XX /note= "Wild type Pro substituted with Gln"
 EN XX
 PD XX WO200224909-A2.
 PF XX 28-MAR-2002.
 PR XX 06-SEP-2001; 2001WO-US28006.
 RA XX 18-SEP-2000; 2000US-233152P.
 P1 XX 21-SEP-2000; 2000US-234140P.
 P2 XX 13-FEB-2001; 2001US-268499P.
 P3 XX 14-AUG-2001; 2001US-312185P.
 P4 XX
 P5 XX (BIOJ) BIOGEN INC.
 P6 XX
 P7 XX Ambrose CM, Thompson JS;
 P8 XX
 P9 XX WPI; 2002-362428/39.
 P10 XX
 P11 XX
 P12 XX
 P13 XX
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 P15 XX
 P16 XX
 P17 XX
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The *inv* gene relates to human BAF-R receptor (BAF-R) nucleic acids and proteins. BAF-R is a B-cell activating factor belonging to the Tumour Necrosis Factor (TNF) family, which is associated with the expression of B-cells and immunoglobulins. The BAF-R proteins, DNA and antibodies are useful for treating, preventing or delaying autoimmune diseases, cancer, tumourigenic conditions or inherited genetic disorders involving B-cells, hyperension, cardiovascular disorders, immunosuppressive diseases, renal disorders, inflammation, organ transplantation and HIV. Autoimmune diseases, which can be treated or prevented by BAF-R, include systemic lupus erythematosus, rheumatoid arthritis, myasthenia gravis, autoimmune haemolytic anaemia, idiopathic thrombocytopenia purpura, Chagas' disease, Grave's disease, anti-phospholipid syndrome, Wegener's granulomatosis, poly-arthritis nodosa and rapidly progressive glomerulonephritis. Plasma cells disorders e.g., multiple myeloma, Waldenstrom's macroglobulinaemia, and heavy-chain disease, primary or immunocyte-associated amyloidosis, and monoclonal gammopathy of undetermined significance. The nucleic acids, protein, protein homologues, and antibodies may further be used in screening assays, in detection assays (chromosomal mapping, tissue typing or forensic biology), predictive medicine (e.g. diagnostic or prognostic assays, monitoring clinical trials, or pharmacogenomic). The polypeptides are further useful as immunogens to raise anti-BaF-R antibodies, or in screening drugs or compounds that modulate BAF-R activity or expression. The present sequence is human BAF-R protein mutant.

Note: The present sequence is not shown in the specification but is derived from human BAF-R retrieved as SEQ ID NO: 5 (AAE22242) and shown in Fig 2d of the specification.

SQ Sequence 185 AA;

Query Match 97.4%; Score 939.5; DB 23; Length 185;

Matches 182; Conservative 0; Mismatches 2; Indels 1; Gaps 1.

QY 1 MRGPRSLGRDAPAPTPCVPAECFDLLVRHCVACGLLRTPPPKPAG-ASSPAPRTALQP 59

Db 1 MRGPRSLGRDAPAPTPCNQAECFDLVRHCVACGLLRTPPPKPAGASSPAPRTALQP 60

QY 60 QESVGAGAGEAALPLPGLLFGAPALLGLALVLALVLVGLVSWRRRQRLRGASSAEAPDG 119

Db 61 QESVAGAGGEAALPLPGLFGAPALLGLALVLVGLVSWRRRQRLRGASSAEAPDG 120

120 DKDAPEPLDKVILSPGISDATAAPWPPGEDPCTTTPGHSVPVPATELGSTELVTTKTA 179

D6 121 DKDAPEPLDKVILSPGISDATAPAWPPPGEDPGTTPPGHSVPVPÄTELGSTELVTTKTA 180

180 GPEQQ 184
QY

Db 181 GPEQQ 185

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Tumour Necrosis Factor; autoimmune disease; immunosuppressive; cancer;

KW HIV; human immunodeficiency virus; genetic disorder; cardiovascular;

haemolytic anaemia; Chagas' disease; Grave's disease; glomerulonephritis;

KW mutant; mutein.

05 Homo sapiens.

FH	Key	Location/Qualifiers
FM	3:55	30

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FT      /note= "wild type val substituted with Asn"
FT      wild type val substituted with Asn
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FT	/note= "Wild type Pro substituted with Gln"
EM	33
Miscellaneous	33

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FT /note= "Wild type Ala substituted with Thr"
XX
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PN WO200224909-A2.
vY

PD 28-MAR-2002.
YY

PF 06-SEP-2001; 2001WO-US28006.
VY

PR 18-SEP-2000; 2000US-233152P.
PR 31-SEP-2000; 2000US-234140P

PR 13-FEB-2001; 2001US-268499P.
 PR 14-AUG-2001; 2001US-313185P

XX
DA (BIOT) BIOGEN INC

XX	Ambrose CM	Thomson JS
XX		
PT		

XX WPB: 2002-362428/39
DP

XX
DT New human BAFE receptor and nucleic acids useful for

PT treating, preventing or delaying e.g. autoimmune diseases, cancers, inherited genetic disorders involving B-cells, cardiovascular

PT disorders, or renal disorders
 XY

PS Example 17; page -; 164pp; English.

The invention relates to human BAF receptor (BAF-R) nucleic acids and proteins. BAF-R is a B-cell activating factor belonging to the Tumour Necrosis Factor (TNF) family, which is associated with the expression of B-cells and immunoglobulins. The BAF-R proteins, DNA and antibodies are useful for treating, preventing or delaying autoimmune diseases, cancer, tumorigenic conditions or inherited genetic disorders involving B-cells, hypertension, cardiovascular disorders, immunosuppressive diseases, renal disorders, inflammation, organ transplantation and HIV. Autoimmune diseases, which can be treated or prevented by BAF-R, include systemic lupus erythematosus, rheumatoid arthritis, myasthenia gravis, autoimmune haemolytic anaemia, idiopathic thrombocytopenia purpura, Chagas' disease, Grave's disease, anti-phospholipid syndrome, Wegener's granulomatosis, poly-arteritis nodosa and rapidly progressive glomerulonephritis. Plasma cells disorders e.g., multiple myeloma, Waldenström's macroglobulinemia and heavy-chain disease, primary or myelocyte-associated myelodysosis, and monoclonal gammopathy of undetermined significance. The nucleic acids, protein, protein homologues, and antibodies may further be used in

CC screening assays, in detection assays (chromosomal mapping, tissue typing
CC or forensic biology), predictive medicine (e.g. diagnostic or prognostic
CC assays, monitoring clinical trials, or pharmacogenomic). The polypeptides
CC are further useful as immunogens to raise anti-BaFR antibodies, or in
CC screening drugs or compounds that modulate BaFR activity or expression.
CC The present sequence is human BaFR-R protein mutant.
CC Note: The present sequence is not shown in the specification but is
CC derived from human BaFR-R referred as SEQ ID NO: 5 (AAE22242) and shown
CC in fig 2d of the specification.

XX Sequence 185 AA;

Query Match 96.9%; Score 935.5; DB 23; Length 185;
Best Local Similarity 97.8%; Pred. No. 1.3e-71;
Matches 181; Conservative 0; Mismatches 3; Indels 1; Gaps 1;

QY 1 MRGPRSLRGDRAPAPTPCPVPAECFPLVVRHCVACGLRTPPKPKAG-ASSPAPRTALOP 59
DB 1 MRGPRSLRGDRAPAPTPCPVPAECFPLVVRHCVACGLRTPPKPKAG-ASSPAPRTALOP 60
DB 60 QESVAGAGEAALPLPGLLFGAPALLGLALVLAIVGLVSWRRRORRLRGASSAEPD 119
DB 61 QESVAGAGEAALPLPGLLFGAPALLGLALVLAIVGLVSWRRRORRLRGASSAEPD 120
QY 120 DKDAPEPLDKVILISFGISDAPAPMPPEGDEPTTPPGHSPVPATLSTELVTTKTA 179
DB 121 DKDAPEPLDKVILISFGISDAPAPMPPEGDEPTTPPGHSPVPATLSTELVTTKTA 180
QY 180 GPEQQ 184
DB 181 GPEQQ 185

RESULT 9
AAE22266
ID AAE22266 standard; Protein; 185 AA.

XX AAE22266;
AC 25-JUL-2002 (first entry)

DE Human BaFR receptor (BaFR-R) mutant, V20N/P21Q/A22T/L27P.

XX Human; BaFR receptor; BaFR-R; cytosolic; hypotensive; inflammation; TNF;
XX Tumour Necrosis Factor; autoimmune disease; immunosuppressive; cancer;
XX myasthenia gravis; hyperextension; organ transplantation; drug screening;
XX HIV; human immunodeficiency virus; genetic disorder; cardiovascular;
XX renal; rheumatoid arthritis; systemic lupus erythematosus; amyloidosis;
XX haemolytic anaemia; Chagas' disease; Grave's disease; glomerulonephritis;
XX multiple myeloma; chromosomal mapping; tissue typing; drug screening;
XX mutant; mutein.

KM Homo sapiens.

XX Key Location/Qualifiers

XX MISC-difference 20 /note= "Wild type Val substituted with Asn"
XX MISC-difference 21 /note= "Wild type Pro substituted with Gln"
XX MISC-difference 22 /note= "Wild type Ala substituted with Thr"
XX MISC-difference 27 /note= "Wild type Leu substituted with Pro"
XX WO200224909-A2.

XX 28-MAR-2002.

XX 06-SEP-2001; 2001WO-US28006.

XX 18-SEP-2000; 2000US-233152P.
XX 21-SEP-2000; 2000US-234140P.
XX 13-FEB-2001; 2001US-268499P.

PR 14-AUG-2001; 2001US-312185P.
XX (BIO) BIOGEN INC.
PA Ambrose CM, Thompson JS;
XX WPI; 2002-362428/39.

PT New human BaFR receptor proteins and nucleic acids, useful for
PT treating, preventing or delaying e.g. autoimmune diseases, cancers,
PT inherited genetic disorders involving B-cells, cardiovascular
PT disorders, or renal disorders

PS Example 17; Page -; 164pp; English.

CC The invention relates to human BaFR receptor (BaFR-R) nucleic acids and
CC proteins. BaFR-R is a B-cell activating factor belonging to the Tumour
CC Necrosis Factor (TNF) family, which is associated with the expression of
CC B-cells and immunoglobulins. The BaFR-R proteins, DNA and antibodies are
CC useful for treating, preventing or delaying autoimmune diseases, cancer,
CC tumorigenic conditions or inherited genetic disorders involving B-cells,
CC hypertension, cardiovascular disorders, immunosuppressive diseases, renal
CC disorders, inflammation, organ transplantation and HIV. Autoimmune
CC diseases, which can be treated or prevented by BaFR-R, include systemic
CC lupus erythematosus, rheumatoid arthritis, myasthenia gravis, autoimmune
CC haemolytic anaemia, idiopathic thrombocytopenia purpura, Chagas' disease
CC Grave's disease, anti-phospholipid syndrome, Wegener's granulomatosis,
CC poly-arthritis nodosa and rapidly progressive glomerulonephritis. Plasma
CC cells disorders e.g., multiple myeloma, Waldenstrom's macroglobulinaemia,
CC heavy-chain disease, primary or immunocyte-associated amyloidosis, and
CC monoclonal gammopathy of undetermined significance. The nucleic acids,
CC protein, protein homologues, and antibodies may further be used in
CC screening assays, in detection assays (chromosomal mapping, tissue typing
CC or forensic biology), predictive medicine (e.g. diagnostic or prognostic
CC assays, monitoring clinical trials, or pharmacogenomic). The polypeptides
CC are further useful as immunogens to raise anti-BaFR antibodies, or in
CC screening drugs or compounds that modulate BaFR-R activity or expression.
CC Note: The present sequence is human BaFR-R protein mutant.
CC Note: The present sequence is not shown in the specification but is
CC derived from human BaFR-R referred as SEQ ID NO: 5 (AAE22242) and shown
CC in fig 2d of the specification.

XX Sequence 185 AA;

Query Match 96.2%; Score 928.5; DB 23; Length 185;
Best Local Similarity 97.3%; Pred. No. 5e-71;
Matches 180; Conservative 0; Mismatches 4; Indels 1; Gaps 1;

QY 1 MRGPRSLRGDRAPAPTPCPVPAECFPLVVRHCVACGLRTPPKPKAG-ASSPAPRTALOP 59
DB 1 MRGPRSLRGDRAPAPTPCPVPAECFPLVVRHCVACGLRTPPKPKAG-ASSPAPRTALOP 60
QY 60 QESVAGAGEAALPLPGLLFGAPALLGLALVLAIVGLVSWRRRORRLRGASSAEPD 119
DB 61 QESVAGAGEAALPLPGLLFGAPALLGLALVLAIVGLVSWRRRORRLRGASSAEPD 120
QY 120 DKDAPEPLDKVILISFGISDAPAPMPPEGDEPTTPPGHSPVPATLSTELVTTKTA 179
DB 121 DKDAPEPLDKVILISFGISDAPAPMPPEGDEPTTPPGHSPVPATLSTELVTTKTA 180
QY 180 GPEQQ 184
DB 181 GPEQQ 185

RESULT 10

XX ABB81489
XX ABB81489 standard; Protein; 175 AA.

XX ABB81489;

XX 02-SEP-2002 (first entry)

DE Mouse Znf12 protein SEQ ID NO:13.
 XX Human: Znf12; tumour necrosis factor receptor; cytosolic;
 XX immunosuppressive; dermatological; antiinflammatory; antidiabetic;
 KM neuroprotective; antineumatic; antiarthritic; antiaesthetic;
 KM nephrotoxic; hypotensive; gene therapy; B lymphocyte; tumour;
 KM autoimmune disorder; systemic lupus erythematosus; myasthenia gravis;
 KM multiple sclerosis; insulin dependent diabetes mellitus; asthma;
 KM rheumatoid arthritis; bronchitis; emphysema; renal disease; lymphoma;
 KM glomerulonephritis; vasculitis; chronic lymphoid leukaemia; nephritis;
 KM pyelonephritis; renal neoplasm; multiple myeloma; amyloidosis;
 KM light chain neuropathy; hypertension; large vessel disease;
 KM graft-versus host disease; graft rejection; Crohn's disease.
 XX Mus sp.
 XX WO200238766-A2.
 XX PD 16-MAY-2002.
 XX 05-NOV-2001; 2001WO-US47018.
 PR 07-NOV-2000; 2000US-246449P.
 PR 20-DEC-2000; 2000US-257131P.
 PR 28-JUN-2001; 2001US-301725P.
 PR 29-AUG-2001; 2001US-315565P.
 XX (ZYMO) ZYMOGENETICS INC.
 PA Gross JA, Xu W, Henne RM, Grant FJ;
 PI WPI; 2002-508212/54.
 DR N-PSDB; ABR89431.
 XX Novel isolated human tumour necrosis factor receptor polypeptide, termed
 PT Znf12, useful for treating autoimmune disorders, emphysema, end
 PT stage renal failure or renal disease and lymphoma
 XX Disclosure; Page 140; 154pp; English.
 PS The present invention describes a human tumour necrosis factor receptor
 XX designated Znf12 (I). (I) has cytostatic, immunosuppressive,
 CC dermatological, antiinflammatory, neuroprotective, antidiabetic,
 CC antineumatic, antiarthritic, antiaesthetic, nephrotoxic and hypotensive
 CC activities, and can be used in gene therapy. (II) can be used for
 CC inhibiting, in a mammal, the activity of a ligand that binds Znf12
 CC (e.g. ZNF4), for treating disorders and diseases associated with B
 CC lymphocytes, activated B lymphocytes or resting B lymphocytes, and for
 CC inhibiting the proliferation of tumour cells. (I) is useful for treating
 CC autoimmune disorders such as systemic lupus erythematosus, myasthenia
 CC gravis, multiple sclerosis, insulin dependent diabetes mellitus, asthma,
 CC rheumatoid arthritis, bronchitis, emphysema and end stage renal failure
 CC or renal disease such as glomerulonephritis, vasculitis, chronic lymphoid
 CC leukaemia, nephritis, and pyelonephritis, and for treating renal
 CC neoplasms, multiple myelomas, lymphomas, light chain neuropathy, or
 CC amyloidosis, hypertension, large vessel diseases, graft-versus host
 CC disease, graft rejection and Crohn's disease. (I) is useful for
 CC modulating the immune system, for regulating B cell responses and
 CC development, for modulating development of other cells, antibody
 CC production and cytokine production, and for modulating T and B cell
 CC communication. The present sequence represents mouse Znf12 which is
 CC given in the exemplification of the present invention.
 XX SO Sequence 175 AA;
 QY Query Match 42.5%; Score 410.5; DB 23; Length 175;
 DB Best Local Similarity 56.1%; Pred. NO. 3.4e-27;
 Matches 101; Conservative 9; Mismatches 55; Indels 15; Gaps 6;
 QY 6 RSLRGDAPAPTCVAPCEFDLLVHRCVACGLRTPPKAGSSAPRATLPOSSVGA 65
 DB 9 RSGRSRDSVPTQCNQTECFDPLVRNCVSCSLPHT--PDTGHTSSLEPTALPQR--- 62

QY 66 GAGEALPLPGLLFGAPALLGLALVLAIV-LVGLVSWRRRRRLRGASSAEPDDKDA- 123
 DB 63 --GSALRPVALLVGAPALGLILALTLVGLVSWRRRQ-QLRITAS---PDRISGVQ 115
 QY 124 PEPLDVIILSLGISTATKPPAMPPEGEPTTPPEGHSVVPVATLGGSTLVTTKTAPEQ 183
 DB 116 QSLSENVFVPSSETPHASPVPKEDADSLPRHSVVPVATLGGSTLVTTKTAPEQ 175
 RESULT 11
 ID AAE22244 standard; Protein; 175 AA.
 AC AAE22244;
 XX 25-JUL-2002 (first entry)
 DT Murine BAFF receptor (BAFF-R) protein.
 DE Murine BAFF receptor; BAFF-R; cytosolic; hypotensive; inflammation;
 XX Tumour Necrosis Factor; autoimmune disease; immunosuppressive; cancer;
 KM myasthenia gravis; hypertension; organ transplantation; drug screening;
 KM HIV; human immunodeficiency virus; genetic disorder; cardiovascular; TNF;
 KM renal; rheumatoid arthritis; systemic lupus erythematosus; amyloidosis;
 KM haemolytic anaemia; Chagas' disease; Grave's disease; glomerulonephritis;
 XX multiple myeloma; chromosomal mapping; tissue typing; drug screening.
 OS Mus musculus.
 XX Key Location/Qualifiers
 FH Domain 70..97
 FT /label= Transmembrane_domain
 PN WO200224909-A2.
 XX 28-MAR-2002.
 PD 06-SEP-2001; 2001WO-US28006.
 XX 18-SEP-2000; 2000US-233152P.
 PR 21-SEP-2000; 2000US-234140P.
 PR 13-FEB-2001; 2001US-268499P.
 PR 14-AUG-2001; 2001US-312185P.
 XX (BIOV) BIOGEN INC.
 PA Ambrose CM, Thompson JS;
 PI WPI; 2002-362428/39.
 DR N-PSDB; AAD35411.
 XX New human BAFF receptor proteins and nucleic acids, useful for
 PT treating, preventing or delaying e.g. autoimmune diseases, cancers,
 PT inherited genetic disorders involving B-cells, cardiovascular
 PT disorders, or renal disorders -
 XX Example 4; Fig 4b; 164pp; English.
 PS The invention relates to human BAFF receptor (BAFF-R) nucleic acids and
 CC proteins. BAFF-R is a B-cell activating factor belonging to the Tumour
 CC Necrosis Factor (TNF) family, which is associated with the expression of
 CC B-cells and immunoglobulins. The BAFF-R proteins, DNA and antibodies are
 CC useful for treating, preventing or delaying autoimmune diseases, cancer,
 CC tumorigenic conditions or inherited genetic disorders involving B-cells,
 CC hypertension, cardiovascular disorders, immunosuppressive diseases, renal
 CC disorders, inflammation, organ transplantation and HIV. Autoimmune
 CC diseases, which can be treated or prevented by BAFF-R, include systemic
 CC lupus erythematosus, rheumatoid arthritis, myasthenia gravis, autoimmune
 CC haemolytic anaemia, idiopathic thrombocytopenia purpura, Chagas' disease,
 CC Grave's disease, anti-phospholipid syndrome, Wegener's granulomatosis,
 CC polyarteritis nodosa and rapidly progressive glomerulonephritis. Plasma
 CC cells disorders e.g., multiple myeloma, Waldenstrom's macroglobulinemia,
 CC heavy-chain disease, primary or immunocyte-associated amyloidosis, and

KM multiple sclerosis; insulin dependent diabetes mellitus; asthma;
KM rheumatoid arthritis; bronchitis; emphysema; renal disease; lymphoma;
KM glomerulonephritis; vasculitis; chronic lymphoid leukaemia; nephritis;
KM pyelonephritis; renal neoplasm; multiple myeloma; amyloidosis;
KM light chain neuropathy; hypertension; large vessel disease;
KM graft-versus host disease; graft rejection; Crohn's disease.

OS Homo sapiens.
OS Synthetic.

XX WO200238766-A2.

XX 16-MAY-2002.

XX 05-NOV-2001; 2001WO-US47018.

XX 07-NOV-2000; 2000US-246449P.

XX 20-DEC-2000; 2000US-257131P.

XX 28-JUN-2001; 2001US-301715P.

XX 29-AUG-2001; 2001US-315565P.

(ZYMO) ZYMOGENETICS INC.

XX Gross JA, Xu W, Henne RM, Grant FJ;

XX WPI; 2002-508212/54.

XX N-PSDB; ABN89456.

XX Novel isolated human tumor necrosis factor receptor polypeptide, termed

XX Zentr 12, useful for treating autoimmune disorders, emphysema, and

XX stage renal failure or renal disease and lymphoma

XX Example 4; Page 152; 154pp; English.

XX The present invention describes a human tumour necrosis factor receptor
CC designated Zentr12 (I). (I) has cytostatic, immunosuppressive,
CC dermatological, antiinflammatory, neuroprotective, antidiabetic,
CC antineumatic, antiarthritic, antiaesthetic, nephrotoxic and hypotensive
CC activities, and can be used in gene therapy. (I) can be used for
CC inhibiting, in a mammal, the activity of a ligand that binds Zentr12
CC (e.g. ZNF4), for treating disorders and diseases associated with B
CC lymphocytes, activated B lymphocytes or resting B lymphocytes, and for
CC inhibiting the proliferation of tumour cells. (I) is useful for treating
CC autoimmune disorders such as systemic lupus erythematosus, myasthenia
CC gravis, multiple sclerosis, insulin dependent diabetes mellitus, asthma,
CC rheumatoid arthritis, bronchitis, emphysema and end stage renal failure
CC or renal disease such as glomerulonephritis, vasculitis, chronic lymphoid
CC leukaemia, nephritis, and pyelonephritis, and for treating renal
CC neoplasms, multiple myelomas, lymphomas, light chain neuropathy, or
CC amyloidosis, hypertension, large vessel diseases, graft-versus host
CC disease, graft rejection and Crohn's disease. (I) is useful for
CC modulating the immune system, for regulating B cell responses and
CC development, for modulating development of other cells, antibody
CC production and cytokine production, and for modulating T and B cell
CC communication. Human Zentr12 is located on chromosome 22q13.2. The
CC present sequence represents a Zentr12-FCs fusion protein, which is
CC used in an example from the present invention.

XX Sequence 328 AA;

Query Match 39.8%; Score 384; DB 23; Length 328;
Best Local Similarity 100.0%; Pred. No. 1.2e-24;
Matches 72; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MRGPPSLKGRDPAATPCVACFDLLVHACVAGLLTRPKXPGAGSPAPRTALQD 60

DB 20 MRGPPSLKGRDPAATPCVACFDLLVHACVAGLLTRPKXPGAGSPAPRTALQD 79

QY 61 ESYGAGAGEAAL 72

DB 80 ESYGAGAGEAAL 91

RESULT 14

ID AAE22246 standard; Protein; 70 AA.

XX AAE22246;

XX 25-JUL-2002 (first entry)

XX Human BAF-R:Fc fusion protein.

XX Human; BAF-R receptor; BAF-R; cytostatic; hypotensive; inflammation; TNF;

XX Tumour Necrosis Factor; autoimmune disease; immunosuppressive; cancer;

XX myasthenia gravis; hypertension; organ transplantation; drug screening;

XX HIV; human immunodeficiency virus; genetic disorder; cardiovascular;

XX renal; rheumatoid arthritis; systemic lupus erythematosus; amyloidosis;

XX haemolytic anaemia; Chagas' disease; Grave's disease; glomerulonephritis;

XX multiple myeloma; chromosomal mapping; tissue typing; drug screening;

XX IgG; immunoglobulin G; fusion protein.

XX Homo sapiens.

XX WO200224909-A2.

XX 28-MAR-2002.

XX 06-SEP-2001; 2001WO-US28006.

XX 18-SEP-2000; 2000US-233152P.

XX 21-SEP-2000; 2000US-234140P.

XX 13-FEB-2001; 2001US-268499P.

XX 14-AUG-2001; 2001US-312185P.

XX (BIO) BIOGEN INC.

XX Ambrose CM, Thompson JS;

XX WPI; 2002-362428/39.

XX New human BAF-R receptor proteins and nucleic acids, useful for

XX treating, preventing or delaying e.g. autoimmune diseases, cancers,

XX inherited genetic disorders involving B-cells, cardiovascular

XX disorders, or renal disorders

XX Claim 44; Fig 20; 164pp; English.

XX The invention relates to human BAF-R receptor (BAF-R) nucleic acids and
CC proteins. BAF-R is a B-cell activating factor belonging to the Tumour
CC Necrosis Factor (TNF) family, which is associated with the expression of
CC B-cells and immunoglobulins. The BAF-R proteins, DNA and antibodies are
CC useful for treating, preventing or delaying autoimmune diseases, cancer,
CC tumorigenic conditions or inherited genetic disorders involving B-cells,
CC hypertension, cardiovascular disorders, immunosuppressive diseases, renal
CC disorders, inflammation, organ transplantation and HIV. Autoimmune
CC diseases, which can be treated or prevented by BAF-R, include systemic
CC lupus erythematosus, rheumatoid arthritis, myasthenia gravis, autoimmune
CC haemolytic anaemia, idiopathic thrombocytopenia purpura, Chagas' disease
CC Grave's disease, anti-phospholipid syndrome, Wegener's granulomatosis,
CC poly-arthritis nodosa and rapidly progressive glomerulonephritis. Plasma
CC cells disorders e.g., multiple myeloma, Waldenstrom's macroglobulinemia,
CC heavy-chain disease, primary or immunocyte-associated amyloidosis, and
CC monoclonal gammopathy of undetermined significance. The nucleic acids,
CC protein, protein homologues, and antibodies may further be used in
CC screening assays, in detection assays (chromosomal mapping, tissue typing
CC or forensic biology), predictive medicine (e.g. diagnostic or prognostic
CC assays, monitoring clinical trials, or pharmacogenomic). The polypeptides
CC are further useful as immunogens to raise anti-BAF-R antibodies, or in
CC screening drugs or compounds that modulate BAF-R activity or expression.
CC The present protein sequence is human BAF-R:immunoglobulin G Fc region
CC fusion protein.

XX Sequence 70 AA;

Query Match 38.9%; Score 375; DB 23; Length 70;

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